

# **DART SERVICE INSTRUCTION**

TO AMEND INSTALLATION INSTRUCTIONS IIN-D412-698 REV. E & INSTRUCTIONS FOR  
CONTINUED AIRWORTHINESS ICA-D412-698 REV. 5

REF. TCCA STC SH92-43

REF. FAA STC SR01446NY

REF. EASA STC EASA.IM.R.S.00709

## **1.0 PURPOSE**

The purpose of this service instruction is to add the D412-698-111/-112 Cabin Door Roller kits for installation on bell mediums equipped with cargo door assembly P/N's 205-031-669-15 (LH) and 205-031-669-16 (RH). Customers who have purchased the D412-698-011/-012 kits can upgrade to D412-698-111/-112 with DSI 9635-011/-012 as follows:

- DSI 9635-011 Roller Bracket Change Kit, LH: converts a D412-698-011 to a D412-698-111;
- DSI 9635-012 Roller Bracket Change Kit, RH: converts a D412-698-012 to a D412-698-112.

## **2.0 PARTS LISTS**

Qty -011	Qty -012	Part Number	Description
X		DSI 9635-011	ROLLER BRACKET CHANGE KIT, LH (TO CONVERT A D412-698-011 KIT)
	X	DSI 9635-012	ROLLER BRACKET CHANGE KIT, RH (TO CONVERT A D412-698-012 KIT)
1	1	D4737-041	BRACKET ASSEMBLY
1		D4737-043	BRACKET ASSEMBLY
	1	D4737-044	BRACKET ASSEMBLY

Qty -111	Qty -112	Part Number	Description
X		D412-698-111	CABIN DOOR ROLLER KIT, LH
	X	D412-698-112	CABIN DOOR ROLLER KIT, RH
3	3	D3121-141	BRACKET ASSEMBLY
1		D3121-143	BRACKET ASSEMBLY
	1	D3121-144	BRACKET ASSEMBLY
9	9	D3199-1	BRACKET
1	1	D3202-1	COVER
1	1	D4737-041	BRACKET ASSEMBLY
1		D4737-043	BRACKET ASSEMBLY
	1	D4737-044	BRACKET ASSEMBLY

**PRELIMINARY ISSUE**

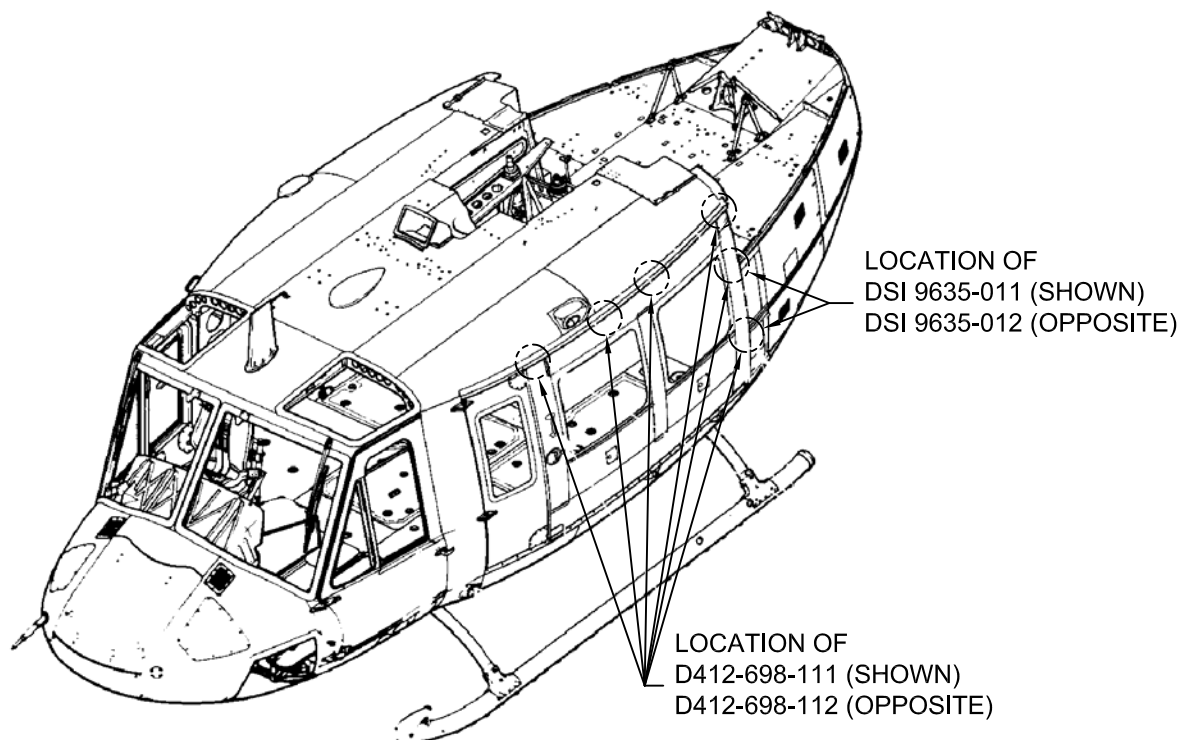
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BRANCH  
DAO # 01-O-01

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BY: \_\_\_\_\_  
D. SHEPHERD (DE # 02)

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PA1	NEW ISSUE	12.11.21	MB	12.11.21
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DRAWN			HAWKESBURY, ONTARIO, CANADA	
CHECKED			DRAWING NO.	REV. PA1
MFG. APPR.	N/A		DSI 9635	SHEET 1 OF 4
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**FIGURE 1 – INSTALLATION OVERVIEW**

## 2.0 INSTALLATION

- 2.1 Remove LH and/or RH sliding doors (ref P/N 205-031-669-15/-16) from the aircraft per the Aircraft Maintenance Manual.
- 2.2 Remove 205-031-436-001 and replace with D3121-141 Bracket (3 places). Reuse existing hardware and shims if determined to be airworthy. Alternatively, if using D412-698-021 Replacement Shim Kit, install D3238-1 & D3238-11 as required. Note that the D3121-141 brackets contain one additional middle slot not used for this installation (see Figure 6 of IIN-D412-698 or Figure 52-8 of ICA-D412-698).
- 2.3 Remove 205-031-435-001/002 and replace with D3121-143 Bracket for left hand doors and D3121-144 Bracket for right hand doors. Reuse existing mounting hardware and shims if determined to be airworthy. Alternatively, if using D412-698-021 Replacement Shim Kit, install D3238-3 & D3238-13 as required. Note that the D3121-143/-144 brackets contain one additional middle slot not used for this installation (see Figure 2 of this service instruction).
- 2.4 Remove 205-031-433-1 Roller Support (LH) and 205-031-433-2 Roller Support (RH) and replace with D4737-043 on left hand doors and D4737-044 on right hand doors. Reuse existing mounting hardware and shims if determined to be airworthy. Alternatively, if using D412-698-021 Replacement Shim Kit, install D3238-5 & D3238-15 as required.  
**NOTE:** The upper aft door track on early model aircraft may not have been modified to accept the extra roller on the D4737-043/-044 Brackets. If this track has not been modified, it should be modified in accordance with BHT TB 205-99-105 at this time.
- 2.5 Remove 205-031-434-1 Roller Support and replace with D4737-041. Reuse existing mounting hardware and shims if determined to be airworthy. Alternatively, if using D412-698-021 Replacement Shim Kit, install D3238-5 & D3238-15 as required.

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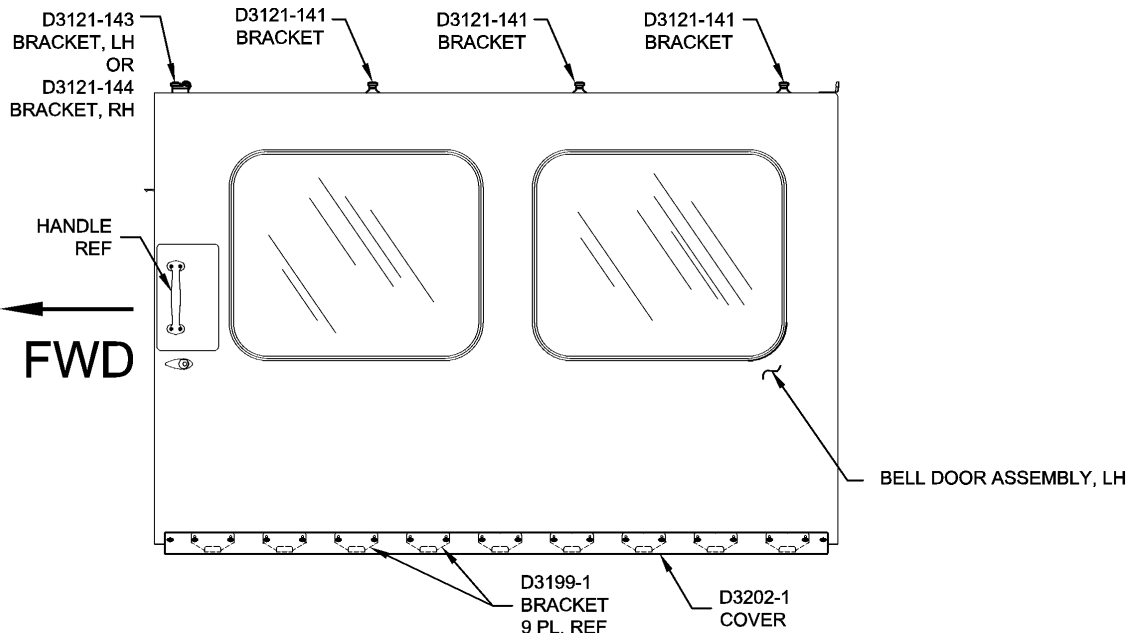
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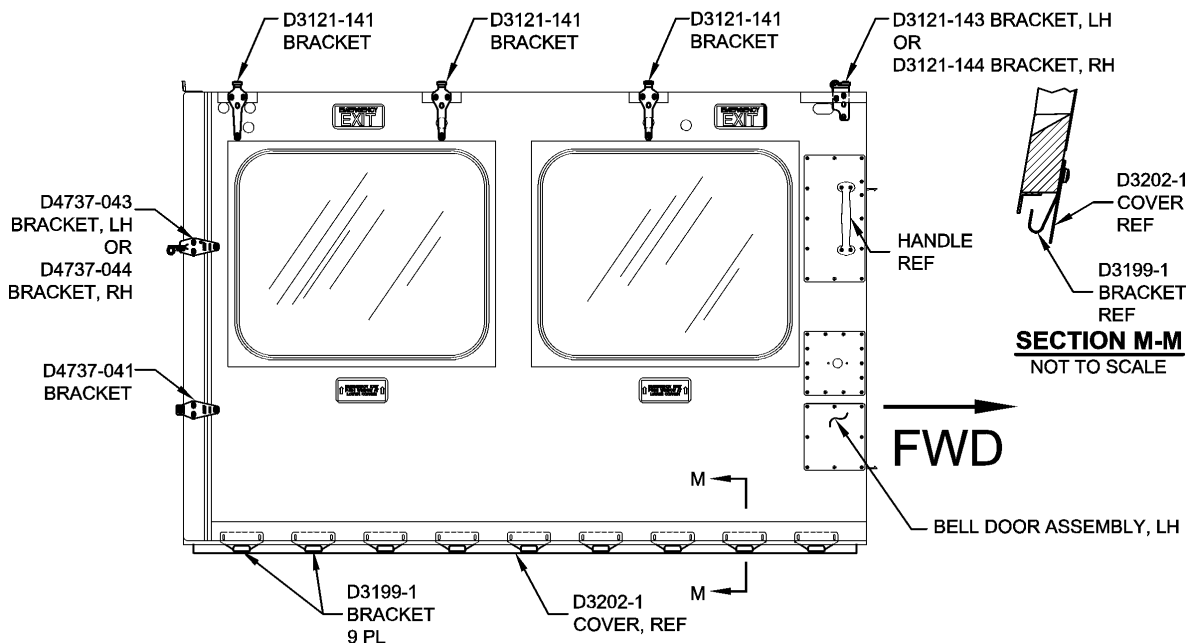
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**OUTSIDE VIEW OF LH SLIDING DOOR (LOOKING INBOARD)**  
(RH DOOR OPPOSITE)



**INSIDE VIEW OF LH SLIDING DOOR (LOOKING OUTBOARD)**  
(RH DOOR OPPOSITE)

**FIGURE 2 – MODIFIED SLIDING DOOR**  
(D412-698-111 SHOWN D412-698-112 OPPOSITE)

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### 3.0 WEIGHT AND BALANCE

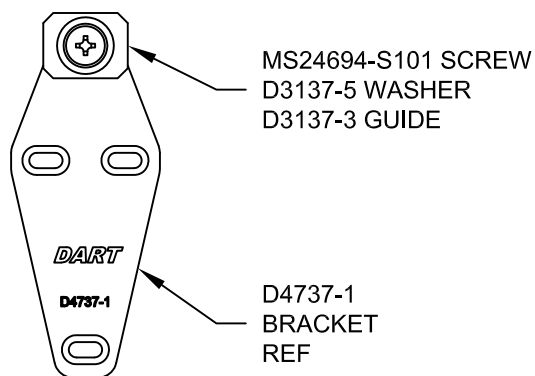
INSTALLATION	WEIGHT	LATERAL		LONGITUDINAL	
		Arm	Moment	Arm	Moment
<b>D412-698-111 Cabin Door Roller Kits (net)</b>	0.82 lb 0.37 kg	-48.0 in -1.22 m	-39.4 in lb -0.45 m kg	130 in 3.30 m	106.6 in lb 1.22 m kg
<b>D412-698-112 Cabin Door Roller Kits (net)</b>	0.82 lb 0.37 kg	48.0 in 1.22 m	39.4 in lb 0.45 m kg	130 in 3.30 m	106.6 in lb 1.22 m kg
<b>Both D412-698-111/-112 Installed (net)</b>	1.64 lb 0.74 kg	0 in 0 m	0 in lb 0 m kg	130 in 3.30 m	213.2 in lb 2.44 m kg
Replace 205-031-436-001 with D3121-141 at STA 162 (net)	0.06 lb 0.03 kg	+/-48.0 in +/-1.22 m	+/-2.9 in lb +/-0.04 m kg	162 in 4.11 m	9.7 in lb 0.12 m kg
Replace 205-031-436-001 with D3121-141 at STA 140 (net)	0.06 lb 0.03 kg	+/-48.0 in +/-1.22 m	+/-2.9 in lb +/-0.04 m kg	140 in 3.56 m	8.4 in lb 0.11 m kg
Replace 205-031-436-001 with D3121-141 at STA 116 (net)	0.06 lb 0.03 kg	+/-48.0 in +/-1.22 m	+/-2.9 in lb +/-0.04 m kg	116 in 2.95 m	7.0 in lb 0.09 m kg
Replace 205-031-435-001 with D3121-143 at STA 96 (net)	0.12 lb 0.05 kg	-48.0 in -1.22 m	-5.8 in lb -0.06 m kg	96 in 2.43 m	11.5 in lb 0.12 m kg
Replace 205-031-435-002 with D3121-144 at STA 96 (net)	0.12 lb 0.05 kg	48.0 in 1.22 m	5.8 in lb 0.06 m kg	96 in 2.43 m	11.5 in lb 0.12 m kg
Replace 205-031-433-005 or 412-030-304-105 with D4737-043 (net)	0.19 lb 0.09 kg	-48.0 in -1.22 m	-9.1 in lb -0.11 m kg	168 in 4.27 m	31.9 in lb 0.38 m kg
Replace 205-031-433-006 or 412-030-304-106 with D4737-044 (net)	0.19 lb 0.09 kg	48.0 in 1.22 m	9.1 in lb 0.11 m kg	168 in 4.27 m	31.9 in lb 0.38 m kg
Replace 205-032-719-001/-101 with D4737-041 (net)	0.12 lb 0.05 kg	+/-48.0 in +/-1.22 m	+/-5.8 in lb +/-0.06 m kg	168 in 4.27 m	20.2 in lb 0.21 m kg

### 4.0 MAINTENANCE

Maintain D412-698-111/-112 in accordance with ICA-D412-698.

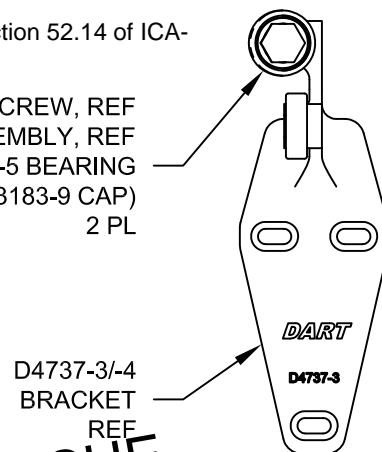
### 5.0 D4737-041/-043/-044 REPLACEMENT PARTS

For D3121-141/-143/-144 Bracket Assemblies, see Section 5.0 of IIN-D412-698 (Section 52.14 of ICA-D412-698).



**D4737-041 BRACKET ASSEMBLY**

D3121-21 SCREW, REF  
D3183-045 BEARING ASSEMBLY, REF  
(-045 CONSISTS OF D3183-5 BEARING  
AND D3183-9 CAP)  
2 PL



**D4737-043/-044 BRACKET ASSEMBLY**

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